

May 26, 2006

MEMORANDUM

TO: Mr. Steve Murray, P.L.S. - Tippecanoe County Surveyor

FROM: David W. Eichelberger, P.E. - CBBEL, Indianapolis

PROJECT: **TSC South Elementary School
CBBEL Project No. 02-038 (ES)**

DEVELOPER/OWNER: **Tippecanoe School Corporation**

LOCATION: **40° 21' 14" Latitude
-86° 50' 23" Longitude**

RECOMMENDATION: **Final Approval with Conditions**

Tippecanoe School Corporation is proposing to construct the new South Elementary School on the north side of County Road 450 South, approximately 1 mile east of County Road 250 East (Concord Road) in Wea Township. The proposed development includes a building with sidewalks, parking lots, and drives. The project site will be accessible via a proposed road off of County Road 450 South to be constructed with a future development to the west. Drives, storm sewer, ponds and utility infrastructure to serve only this project will be constructed at this time. Under existing conditions, stormwater sheet flows to the north into the existing Kirkpatrick Regulated Drain. The proposed Upper Kirkpatrick Ditch Reconstruction project will adjoin the north side of the project and serve as the final post-developed outlet for the site. Additional future development in the area may result in regional detention along the Kirkpatrick Regulated Drain. Temporary detention basins will be constructed and utilized on the site until Upper Kirkpatrick Regulated Drain improvements are completed. Since this site currently does not have a positive outlet, the applicant is proposing to construct an off-site swale within the Kirkpatrick Regulated Drain easement, parallel to the existing closed tile.

This project will have a direct outlet to the Kirkpatrick Regulated Drain. The proposed off-site swale encroaches into the Kirkpatrick Regulated Drain easement. There are no regulated drain crossings proposed with this project. The project site is not within the Tippecanoe County MS4 Area.

This project was previously reviewed in memorandums dated February 24, and May 18, 2006. After a review of the most recently provided information, CBBEL recommends final approval of the stormwater management plan with the following conditions:

Variances/Encroachments

The Upper Kirkpatrick Ditch Reconstruction has not been started at this time. Currently, this project does not have a positive outlet for post-developed stormwater runoff. The applicant is proposing to construct an off-site swale within the Kirkpatrick Regulated Drain easement, parallel to the existing tile, to provide a positive outlet. This swale is a temporary measure to be used until the Upper Kirkpatrick Ditch Reconstruction project is constructed.

This temporary swale constitutes an encroachment into the Kirkpatrick Regulated Drain easement. The applicant must continue to coordinate this encroachment with the Tippecanoe County Surveyor's Office. This encroachment will also require final approval from the Tippecanoe County Drainage Board.

Stormwater Quantity

1. The applicant should address the following comments:
 - The scale provided on sheets SP3.0 and SP3.1 is incorrect.
 - The proposed diversion swale has a starting elevation of 658.2, which appears to be incorrect
 - The peak 100-year water surface elevations in the proposed detention ponds do not agree with the calculations provided.
 - The storm sewer profiles on sheet SP6.1 indicate 10" diameter orifice plates for the detention ponds. Other plan sheets and the calculations indicate 9" diameter orifice plates.
2. The provided calculations indicate that the peak 100-year water surface elevation in the west pond will be 654.19. Based on this elevation, it appears that the northwest corner of the pond will be overtopped. The applicant should provide additional grading information to verify that the peak 100-year water surface elevation will be contained within the pond area.
3. The applicant has not included grading information and details for the emergency spillways from either of the two proposed ponds. The plans indicate that the "Emergency spillway to be completed with final County design and construction of Kirkpatrick Ditch". However, the emergency spillways should be constructed with the detention ponds, and the grading and details should still be included in the plans.
4. The applicant is proposing to convey off-site flows through a vegetated swale. The applicant has noted in the drainage report that this swale will be conveying 61.7 cfs during the 100-year storm event. The provided calculations indicate that the 100-year discharge will be higher than 61.7 cfs. The applicant should provide additional information to verify the 100-year discharge.
5. The applicant should notify the property owners between the subject site and Concord Road in accordance with Chapter 3, Section 2. C. of the Ordinance.

Stormwater Quality

1. The applicant should complete and submit the "Commercial Property Recorded Master Covenant and Agreement Regarding On-Site BMP Maintenance and Drainage".
2. The O & M Manual should include the name of a contact person representing the owner.
3. The applicant should provide a signed copy of the Notice of Intent (N.O.I).

General Conditions

1. The applicant must present the project at the Tippecanoe County Drainage Board meeting for the project to be considered for approval.
2. The applicant must pay any final drainage review fees per Ordinance 2005-04-CM and submit a letter to the County Surveyor's Office stating that these fees will be paid.
3. The applicant must pay the Phase II stormwater program fees.
4. All listed issues must be completely addressed before final plan approval and sign-off will be granted by the County Surveyor's Office.

No error or omission in either the plans, calculations or applications (whether said plans, calculations or applications have been reviewed by the review engineer or not) shall permit or release the applicant and designer from constructing this work in any other manner than that provided for in the County Ordinance.

pc: TBIRD

DWE/sdb

M02-038ES3.DOC